

REMARKS

First, it is noted that Fig. 1 has been amended to provide reference numerals (21, 22) for the roof lowering and raising mechanism which is shown in detail in Fig. 13.

The Examiner has rejected claims 1 - 9 under 35 USC 102(b) as being anticipated by either Nania (US 6 666 495) or Daimler Benz (EP 0 857 597), he has rejected claims 10 - 13 under 35 USC 103(a) as being unpatentable over either Nania or Daimler-Benz in view of Albrecht (US 2 768 857) and he has rejected claims 14 - 15 under 35 USC 103(a) as being unpatentable over either Nania or Daimler-Benz in view of Rothe (US 6 053 560) and finally he has rejected claims 16 under 35 USC 103(a) as being unpatentable over either Nania or Daimler-Benz in view of Obendiek (US 6 637 802).

Nania (US 6 666 495) discloses a vehicle convertible system with a roof section including a plurality of retractable panels and a movable separate rear section which defines part of a storage area for the retractable panels. The rear section 14 can be pivoted backward to provide a passage for pivoting the panels 22, 24, 26 - folded on top of one another into a storage area 43 in the rear part of the vehicle. The roof panels 22, 24, 26 are all rigid panels.

Daimler-Benz (EP 0 857 597) discloses a vehicle with a convertible roof which, when closed, covers the passenger compartment of the vehicle and, when opened, is folded and moved into a rear storage compartment behind the rear seats of the vehicle. The rear part of the roof is a rigid body part which remains in place during the transfer of the roof parts. Rather, the rear seats are folded down during the transfer to provide the space needed for moving the rigid parts of the roof 9 into the storage space behind the rear seats. The parts of the roof 9 are all rigid panels.

Albrecht (US 2 768 857) discloses a convertible soft roof support mechanism by means of which a convertible roof can be folded into a rear storage compartment provided with a cover.

Rothe (US 6 053 560) discloses a convertible vehicle wherein the rigid roof shells are pivotable into a rear storage compartment where they are stored in a vertical orientation.

Obendiek (US 6 637 802) discloses a convertible top drive mechanism for moving the shells forming the top between the closed position and an open position. It is also mentioned that the shells 4, 5, 6 may be in the form of roll bars if a flexible roof skin is used instead of the rigid shells.

The present invention resides in a roof for a convertible vehicle including a folding roof (2) supported by a linkage (11) mounted to the vehicle body with a roof cover material (12) extending over the roof linkage (11) and a rigid rear roof part (5) which is supported on the vehicle body and is closed when the folding roof (2) is closed and also when the folding roof (2) is in a storage position. The rear roof part (5) is movably supported on the vehicle body by a four link operating mechanism providing at the front end of the rear roof part (5), when raised, a sufficiently large space for transferring the front folding roof (2) into a storage compartment (7) disposed below the rear roof part while the rear roof part (5) can be raised independently of the position of the front folding roof (2) for accessing the trunk of the vehicle.

In Nania, the roof consists of rigid roof shells 22, 24 26 and the rear roof part 14 is pivotally supported at its rear bottom end so that it can be pivoted backwardly for depositing the front roof shells 22 - 26 in a storage compartment 43 behind the rear seats of the vehicle. No convenient access is provided for the trunk of the vehicle for loading or unloading luggage.

In Daimler-Benz, the rear roof section 5 is a fixed part of the vehicle body; it remains in place during the transfer of the roof 7 between the closed and open positions. To provide space for the passage of the roof from the closed position and the storage compartment behind the rear seat and vice versa, the rear seat must be folded down.

Both concepts are quite different from that described in the present application and now more distinctly defined in claim 1 as amended, wherein, with the support of the rear roof part (which includes the trunk cover) by a four-link mechanism a relatively large access space can be provided for moving the front folding roof in a folded state into, and out of, the storage compartment behind the vehicle passenger compartment and also for loading and unloading the trunk - no matter whether the folding roof is closed or open.

Neither prior art concept anticipates the arrangement according to the invention and both prior art concepts are basically contradictory to one another so that a combination of the two prior art concepts is not indicated.

Reconsideration of the rejection of claim 1 on the basis of either or both of the two cited references is therefore respectfully requested.

Claim 4 defines that the rear roof (5) extends also over the rear trunk of the vehicle and claim 5 defines that the front folding roof (5) comprises a front folding roof section (3) and a rear folding roof section (4) and each folding roof section (3, 4) includes a longitudinal frame member (13, 14), which, in the closed position of the folding roof (2), extend in the longitudinal direction of the vehicle and the longitudinal frame member (13) of the front folding roof section (3) is pivotally connected to the respective longitudinal frame member (14) of the rear folding roof section (4).

These features are considered to be advantageous in connection with the arrangement as defined in claim 1. They represent a combination of a solid roof section (represented by the longitudinal frame members) and a softtop (folding) vehicle roof where no rigid longitudinal frame members are provided (see for example Albrecht; the side members 42 are operating links 42 and operating arms 74 which pivot inwardly in a horizontal plane for moving the front bow 66 of the folding roof forward or backward).

But in any case, both claims 4 and 5 are directly dependent on claim 1 so that they include all the features of claim 1 and should be patentable already for that reason.

Claims 6 - 9 have been cancelled.

Claim 10 has been combined with claim 11. Claims 10, 12 and 13 define an operating mechanism for moving the folding roof (2) into, and out of, the storage compartment by means of a multi-joint mechanism which comprises upper and lower operating arms (21, 22) which are pivotally joined and wherein the lower operating arm (21) is pivotally connected to the vehicle body and the upper operating arm (22) is pivotally connected to the folding roof (2). The upper and lower operating arms at each side of the roof are capable of folding toward each other such that they extend in the storage position of the folding roof (2) in a direction transverse to the longitudinal vehicle axis.

Such an operating mechanism is not disclosed in any of the cited references and certainly not by Albrecht as alleged by the Examiner. Reconsideration of claim 10, which has been amended to define the arrangement according to the invention in a more distinct manner, is respectfully requested.

Claims 12 and 13 define advantageous features for the arrangement as defined in claim 10 on which claims 12 and 13 depend. These claims should be patentable in connection with claim 10.

Reconsideration of claims 12 and 13 is respectfully requested.

Claims 14 to 15 have been canceled as they are directed to features not considered to be of particular importance.

Claim 16 defines that a rollover bar (10) is integrated into the rear roof part (5). This is considered to be an advantageous feature as the rear roof part is solid so that a sturdy

support can be provided for the rollover bar. The reference cited by the Examiner in this connection, that is Obendieck, discloses at the end of the description that it is possible to provide "a roll bar" between two chains 14 and to couple it to a flexible roof skin, but this does not seem to be a rollover bar, but simply a rolling bar supporting the flexible roof. But even if the "roll bars" would be considered to be rollover bars, there would be no support structure for supporting the vehicle weight if the vehicle should roll over.

In any case, in accordance with claim 16, the rollover bar is integrated into the removable rear roof section and such an arrangement is not disclosed in any of the references cited by the Examiner.

Reconsideration of the rejection of claim 16 is therefore also requested.

Coming no back to the Examiner's allegation that "the folding roof connected with the vehicle body by way of a multi-joint mechanism" is not shown in the drawings (Objections to the Drawings), reference is made to Fig. 1 in which the operating arms 21, 22 are shown (originally not indicated by reference numerals) and to Fig. 13, in which their operation for lowering and raising the front roof 2 is clearly shown. They are described in the description, (page 8, line 16 to page 9, line 14). They are referred to earlier in the present response.

It is therefore respectfully requested that the Examiner reconsiders and withdraws his objections to the drawings in this respect.

Allowance of claims 1, 4, 10, 12, 13 and 16 as amended is solicited.

Respectfully submitted,



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Korean Inventor's Seal

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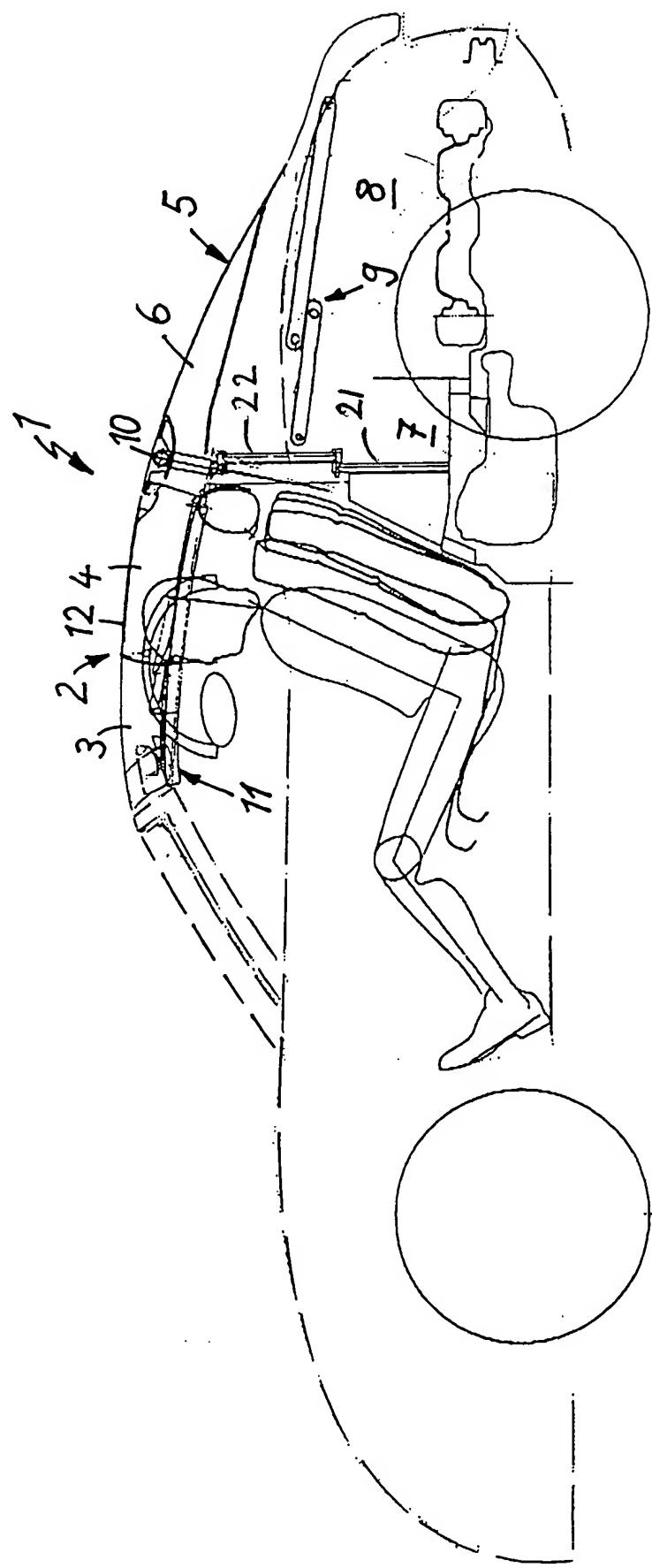


Fig. 1